VIDEO RECORDING SYSTEM UTILIZING STORAGE REDUNDANCY TO TRANSFER NON-TIME-CRITICAL, ERROR-INTOLERANT DATA SEGMENTS WHILE TRANSFERRING TIME-CRITICAL, ERROR-TOLERANT STREAMING DATA SEGMENTS AT A REQUIRED DATA TRANSFER RATE

Abstract of the Disclosure

The present invention may be regarded as a video recording system and method of transferring a non-time-critical, error-intolerant data segment stored on a disk drive, which is responsive to a set of data transfer commands generated by a host processor and which is operating in a mode optimized for transferring time-critical, error-tolerant streaming data segments stored or to be stored on the disk drive. The method includes sending a sequence of data transfer commands generated by the host processor to the disk drive to transfer a respective sequence of time-critical, error-tolerant streaming data segments at a required data transfer rate. The method further includes selectively interposing a first data transfer command into the sequence of data transfer commands, the first data transfer command initiating a first transfer of the non-time-critical, error-intolerant data segment from a first storage location. The method further includes transmitting a data transfer error signal generated by the disk drive to the host processor, the data transfer error signal having a state that indicates whether any data transfer errors have occurred with respect to the first transfer of the non-time-critical, error-intolerant data segment. The method further includes selectively interposing a second data transfer command into the sequence of data transfer commands, the second data transfer command initiating a second transfer of the non-time-critical, error-intolerant data segment from a second storage location, thereby utilizing storage redundancy to achieve an accuracy required for the non-time-critical, error-intolerant data segment while maintaining the required data transfer rate of the sequence of time-critical, error-tolerant data segments.